

E7.3 10344

CR 130803

PROGRESS REPORT

Covering the period 1 October - 30 November 1972 for the: "Study to Demonstrate the Feasibility of and Determine the Optimum Method of Remote Haze Monitoring by Satellite"

This contract is ERTS-A proposal number SR 230, GSFC identification number PR 173.

There are no problems impeding the progress of the investigation.

Accomplishments during this period:

As much ground truth data, as weather permitted, were obtained during every ERTS-1 pass over our test area.

<u>Date</u>	<u>Data Obtained*</u>	<u>Notes</u>
2 Oct	a) b) c) d)	Partly cloudy, probably too cloudy for analysis
3 Oct	a) b)	Very cloudy
20 Oct.	a) b)	Very cloudy
21 Oct.	a) b) c) d)	Ideal conditions, ranging from quite hazy to clear. Complete ground truth
7 Nov.	a) b)	Very cloudy
8 Nov.	a) b) c) d)	Ideal data, very clear. Will make good comparison with 21 Oct data
25 Nov	a) b) c) d)	Some high cirrus might confuse analysis
26 Nov.	a) b) c) d)	Good day, clear. Complete ground truth

- * a) Visibility data from airports
b) Air pollution control district data
c) Aureole monitor
d) Visual and photographic data. Altitude of the top of the haze layer
Vertical temp profiles

a) and b) are obtained from outside sources. c) and d) are actively gathered by the contractor specifically for this analysis

(E73-10344) STUDY TO DEMONSTRATE THE
FEASIBILITY OF AND DETERMINE THE OPTIMUM
METHOD OF REMOTE HAZE MONITORING BY
SATELLITE Progress (Aerospace Corp., Los
Angeles, Calif.) 3 p HC \$3.00 CSCL 03B

N73-19343

Unclass

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We are extremely pleased with the haze distribution and the lack of clouds during these ERTS-1 passes, and with the fact that complete ground truth data were obtained. In particular the 21 Oct and 8 Nov data form a set that are expected to be very valuable. On 21 Oct much of the test area was quite hazy. There were also areas of moderate and light haze as well as clear regions. On 8 Nov most of the test area, including the areas that were hazy on 21 Oct, were quite clear. The images from these two passes will be compared to determine the effects of haze. There will be some differences between the images because of changes in terrain, but this effect is minimized because we are dealing with consecutive passes.

70 mm pos and neg transparencies for the Sept 14 pass were received. This data was tentatively picked for analysis on the basis of ground truth data. Techniques were quickly established to enlarge and study these frames. These data looked very much as expected on the basis of our ground truth. We were especially interested in the loss of contrast in Band 4 caused by Rayleigh scattering in the atmosphere. This effect was as bad, or perhaps a little worse than anticipated. We were quite fascinated by these pictures, particularly the geographic features that are brought out, which one doesn't notice from the ground or even from an airplane.

Accomplishments planned for the next reporting period:

- Continue acquisition of ground truth data.

- Start digital analysis of the 14 Sept. data

No publications were prepared during this reporting period.

There are no changes recommended in operations and no changes contemplated or requested in standing order products.

No ERTS Image Descriptor Forms were submitted.

A request for bulk digital tapes of the 14 Sept. pass was submitted.

ERTS DATA REQUEST FORM
560-213 (7/72)

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1. DATE 25 October 1972

5. TELEPHONE NO. (213) 648-7244 ☐ NEW

2. USER ID PR 173

6. CATALOGUES DESIRED

4. SHIP TO: Dr. Ernest H. Rogers

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The Aerospace Corporation

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